

CLAIM AMENDMENTS

1. (Canceled).

2. (Canceled).

3. (Canceled).

4. (Canceled).

5. (Canceled).

6. (Canceled).

7. (Currently amended) A light emitting polymeric material, said light emitting polymeric material capable of producing electroluminescence upon being provided with a flow of electrons, said light emitting polymeric material comprising:

a layer of a plurality of rotaxanes each comprising a polymeric chain having at least one ring extending about the circumference of said polymer chain ~~so as to maintain said rotaxanes in a sufficiently deaggregated state, so as to substantially prevent the redshifting of said electroluminescence and the lowering of light emission efficiency of said electroluminescence; and~~
a layer of an electron blocking polymer.

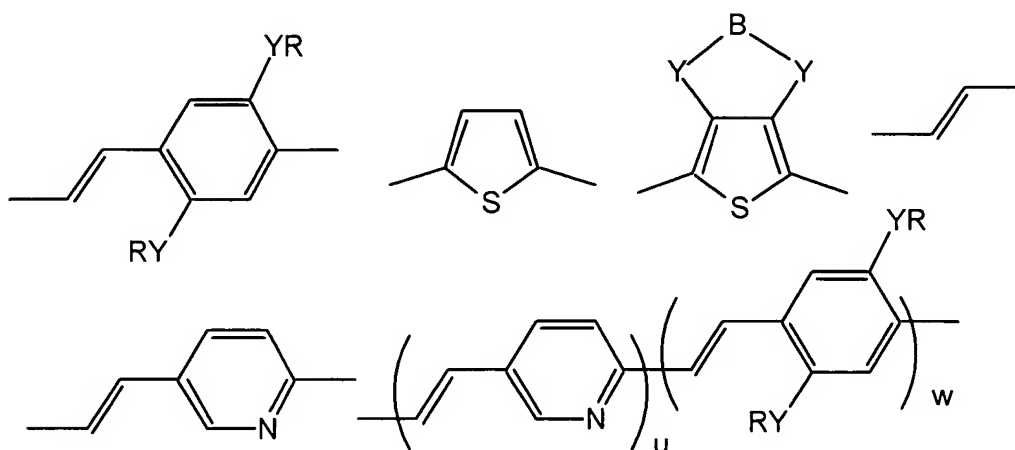
8. (Canceled).

9. (Currently amended) A light emitting polymeric material according to claim [[8]] 1 wherein said electron blocking polymer is poly(vinylcarbazole).

10. (Original) A light emitting device, said device comprising a light emitting polymeric material according to claim 7, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons.

11. (Canceled).

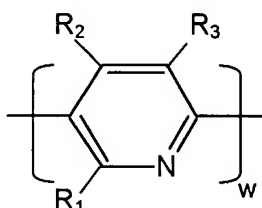
12. (Currently amended) The light emitting polymeric material according to claim 7, wherein at least one said polymeric chain is selected from the group consisting of alternating and random copolymers having at least one structure selected from the group consisting of:



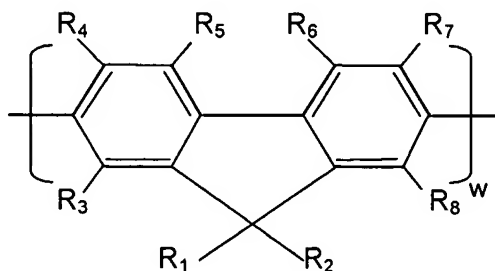
wherein R is an alkyl group containing 1 to 16 carbon atoms; wherein Y is selected

from the group consisting of - CH₂, O, S, CO and NR₂ wherein R is an alkyl group containing 1 to 16 carbon atoms; B is selected from the group consisting of (CH₂)_n, aryl groups having 6 to 14 carbon atoms, and calixarene having 18 to 200 carbon atoms; wherein n may be of a value independently selected from the group 0 to 6, inclusive; wherein u may be of a value independently selected from the group 1 to 6, inclusive; and wherein w may be of a value independently selected from the group 1 to 6, inclusive.

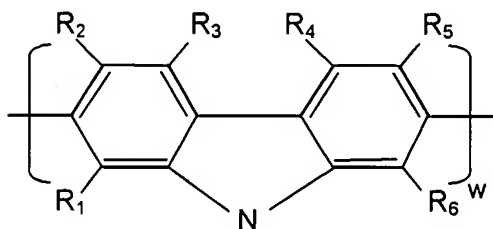
13. (Previously presented) The light emitting polymeric material according to claim 7, wherein at least one said polymeric chain is selected from the group consisting of alternating and random copolymers having at least one structure selected from the group consisting of:



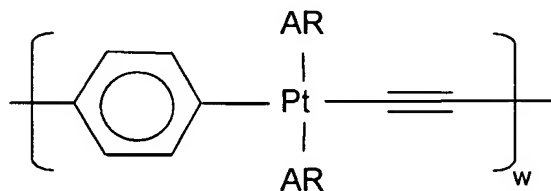
wherein R₁, R₂, and R₃ are independently selected from the group consisting of hydrogen, alkyl groups, alkoxy groups, aromatic groups, and N(R)₂ where R is an alkyl group comprising from 1 to 16 carbon atoms, and wherein w is a value from 1 to about 100;



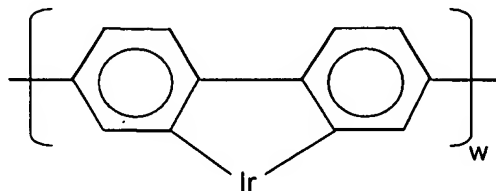
wherein R_1 and R_2 are each independently selected from the group consisting of hydrogen, alkyl groups, alkoxy groups, aromatic groups, spiroflourenes, and $N(R)_2$ where R is an alkyl group comprising from 1 to 16 carbon atoms, wherein R_3 through R_8 are each independently selected from the group consisting of hydrogen, alkyl groups, and alkoxy groups, aromatic groups, and $N(R)_2$ and wherein w is a value from 1 to about 100;



wherein $R_1 - R_6$ are each independently selected from the group consisting of hydrogen, alkyl groups, and alkoxy groups, and wherein w is a value from 1 to about 100;

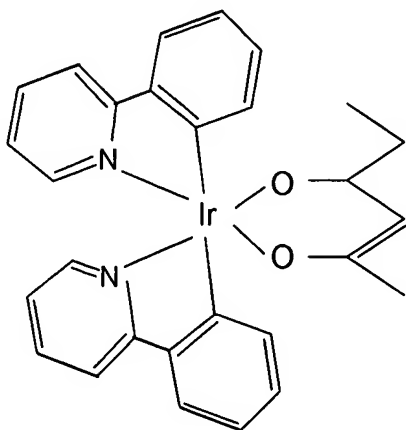


wherein AR is an aromatic group and w is a value from 1 to about 100; and

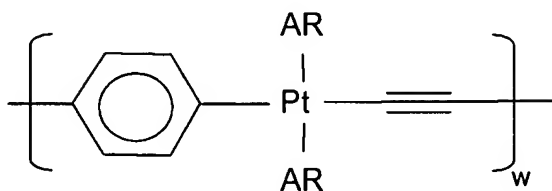


wherein w is a value from 1 to about 100.

14. (Previously presented) The light emitting polymeric material according to claim 7, wherein at least one said ring is selected from the group consisting of: cyclodextrins, cyclophanes, rings comprising



, rings comprising



wherein AR is an aromatic group and w is a value from 1 to about 100, rings comprising pyridine groups, and rings comprising quinoline groups.

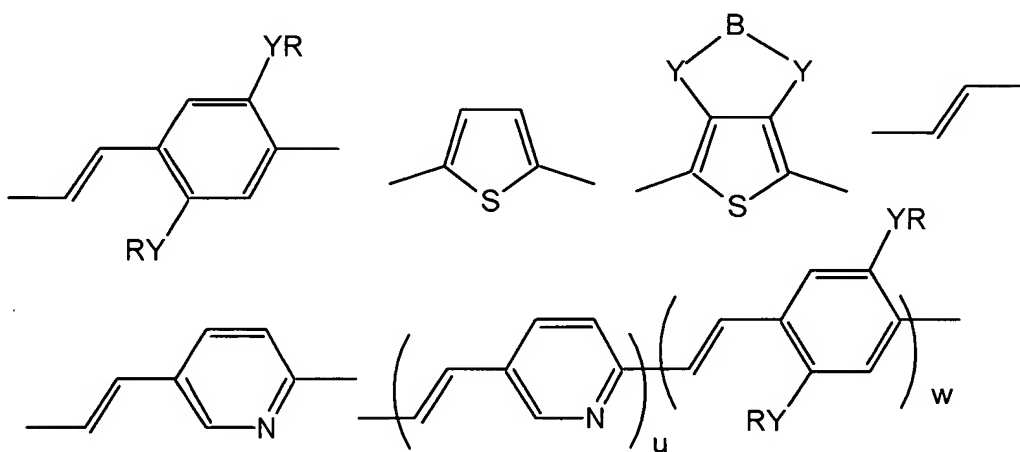
15. (Canceled).

16. (Previously presented) A light emitting device, said light emitting device comprising a layer of light emitting polymeric material according to claim 7 wherein said layer of

light emitting polymeric material is between a first polymeric layer and a second polymeric layer, wherein said first polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers and wherein said second polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers.

17. (New) A light emitting polymeric material, said light emitting polymeric material capable of producing electroluminescence upon being provided with a flow of electrons, said light emitting polymeric material comprising:

a plurality of rotaxanes each comprising a polymeric chain having at least one ring extending about the circumference of said polymer chain, wherein at least one said polymeric chain is selected from the group consisting of alternating and random copolymers having at least one structure selected from the group consisting of:

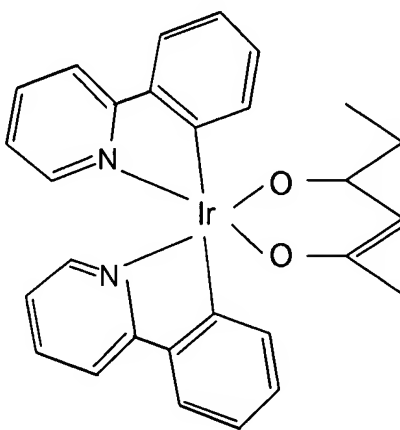


wherein R is an alkyl group containing 1 to 16 carbon atoms; wherein Y is selected from the group consisting of - CH₂, O, S, CO and NR₂ wherein R is an alkyl group containing 1 to 16 carbon atoms; B is selected from the group consisting of (CH₂)_n, aryl

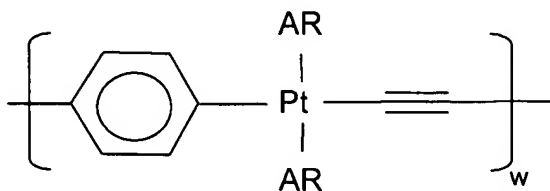
groups having 6 to 14 carbon atoms, and calixarene having 18 to 200 carbon atoms; wherein n may be of a value independently selected from the group 0 to 6, inclusive; wherein u may be of a value independently selected from the group 1 to 6, inclusive; and wherein w may be of a value independently selected from the group 1 to 6, inclusive.

18. (New) A light emitting device, said device comprising a light emitting polymeric material according to claim 17, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons.

19. (New) The light emitting polymeric material according to claim 17, wherein at least one said ring is selected from the group consisting of: cyclodextrins, cyclophanes, rings comprising



, rings comprising

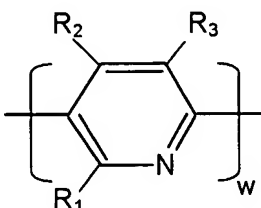


wherein AR is an aromatic group and w is a value from 1 to about 100, rings comprising pyridine groups, and rings comprising quinoline groups.

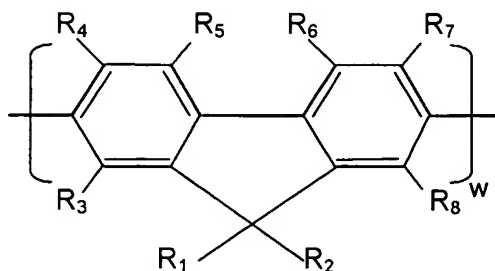
20. (New) A light emitting device, said light emitting device comprising a layer of light emitting polymeric material according to claim 17 wherein said layer of light emitting polymeric material is between a first polymeric layer and a second polymeric layer, wherein said first polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers and wherein said second polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers.

21. (New) A light emitting polymeric material, said light emitting polymeric material capable of producing electroluminescence upon being provided with a flow of electrons, said light emitting polymeric material comprising:

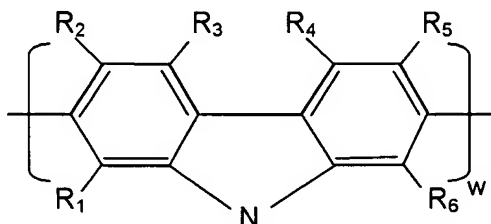
a plurality of rotaxanes each comprising a polymeric chain having at least one ring extending about the circumference of said polymer chain, wherein at least one said polymeric chain is selected from the group consisting of alternating and random copolymers having at least one structure selected from the group consisting of:



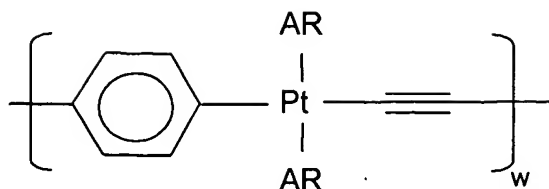
wherein R_1 , R_2 , and R_3 are independently selected from the group consisting of hydrogen, alkyl groups, alkoxy groups, aromatic groups, and $N(R)_2$ where R is an alkyl group comprising from 1 to 16 carbon atoms, and wherein w is a value from 1 to about 100;



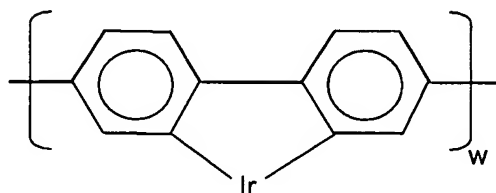
wherein R_1 and R_2 are each independently selected from the group consisting of hydrogen, alkyl groups, alkoxy groups, aromatic groups, spirofluorenes, and $N(R)_2$ where R is an alkyl group comprising from 1 to 16 carbon atoms, wherein R_3 through R_8 are each independently selected from the group consisting of hydrogen, alkyl groups, and alkoxy groups, aromatic groups, and $N(R)_2$ and wherein w is a value from 1 to about 100;



wherein $R_1 - R_6$ are each independently selected from the group consisting of hydrogen, alkyl groups, and alkoxy groups, and wherein w is a value from 1 to about 100;



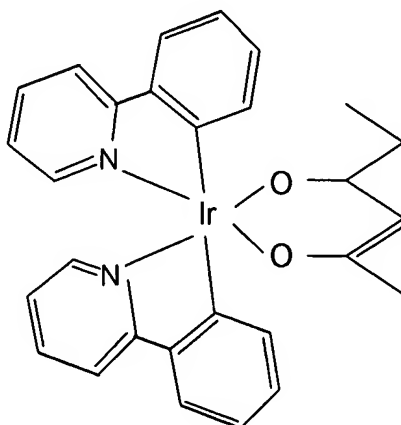
wherein AR is an aromatic group and w is a value from 1 to about 100; and



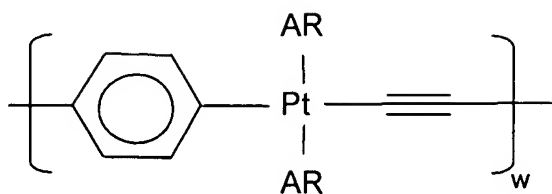
wherein w is a value from 1 to about 100.

22. (New) A light emitting device, said device comprising a light emitting polymeric material according to claim 21, and a source of electrical current so as to supply said electron transporting polymer with a flow of electrons.

23. (New) The light emitting polymeric material according to claim 21, wherein at least one said ring is selected from the group consisting of: cyclodextrins, cyclophanes, rings comprising



, rings comprising



wherein AR is an aromatic group and w is a value from 1 to about 100, rings comprising pyridine groups, and rings comprising quinoline groups.

24. (New) A light emitting device, said light emitting device comprising a layer of light emitting polymeric material according to claim 21 wherein said layer of light emitting polymeric material is between a first polymeric layer and a second polymeric layer, wherein said first polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers and wherein said second polymeric layer comprises a material selected from the group consisting of semi-conductive and conductive polymers.